REMARKS

With respect to the Drawing & Specification, Claim Objections:

Regarding the numeral reference, "44" of Fig. 8, the description of the "connecting tube (44)" is added in the Specification Amendment.

Regarding the claim objection, the objected claims are obviated by the above claim amendment.

Claim Rejection under 35 U.S.C. 112 - Second Paragraph:

The ground rejection of claims 1 to 8 under 35 U.S.C. 112, Second paragraph is obviated by the above Claim Amendment.

Regarding the Claim Rejection under 35 U.S.C. §103 (a):

The ground rejections of claims 1-6, 9 and 10 under 35 U.S.C. §103(a) as being unpatentable over Spence et al. (U.S. Patent No.: 6,540,895), and claims 7-8 under 35 U.S.C. §103(a) as being unpatentable over Spence et al. (U. S. Patent No.: 6,540,895) in view of Bessis et al. (U. S. Patent No. 3,955,890) are null and void by the above claim amendment.

However, the differences between the cited reference and the instant invention must be noted as follows:

Spence et al. (U.S. Patent No.: 6,540,895) discloses "Microfabricated cell sorter for chemical and biological materials" comprising: a device with analysis units containing a cascade of detection and discrimination regions for successive rounds of cell sorting to

sequentially assay the cells. (Spence: Fig. 5 & Col. 21, lines 34~45) A typical analysis unit has an inlet region for feeding or communicating with a main channel, which in turn communicates with two or more branch channels at a junction or branch point forming, for example a T-shape or Y-shape. (Spence: Col. 10, lines 43~ 67)

On the contrary, the present invention has configured single inlet, single test region and single waste chamber. The base of the blood sample pot (21) is connected to one end of the slit channel (22) for flowing the blood sample, and the opposite end of the slit channel (22) is connected to the base of the waste blood pot (23) for collecting the tested blood sample. (Page 6, lines 6 ~ 16)

Spence also teaches the usage of "reporters," such as a dye, fluorescent, ultraviolet or chemiluminescent agent, etc. (Spence: Col. 7, lines 11~ 36) The cells are separated based on the intensity of a signal from an optically-detectable reporter bound to or associated with the cells as they pass through a detection window or detection region in the device. The cells having an amount of the reporter is excited by using a laser beam focused on the cells for reflecting the Fluorescence while the cells are passing through a detection region. The reporter signal is collected by a microscope and measured by a photomultiplier tube (PMT). (Spence: Col. 13, line 35 ~ Col. 14, line 42)

For capturing the images, Spence uses the microscope to focus the images of the sample to the plane of the adjustable slit. An achromatic lens collimates the light from the slit image onto the active area of the photomultiplier tube (PMT). (Spence: Col. 32, line 54 ~ Col. 35, line 35)

On the contrary, the present invention teaches: a light-emitting unit (10) consisting of a Laser Diode or Light Emitting Diode (LED) for illuminating the light beam to the blood sample. A slit channel (22) is made of a transparent material for transmitting the light beam. The illuminated beam is diffracted on the deformed blood cell and projected on the screen.

An image-capturing unit (35) enables to capture the deformed blood cell diffraction image, which is projected on the screen. The diffraction image of the deformed blood cell is directly captured by the image-capturing unit (35) such as a CCD-sensor array without projecting on the screen. (Page 10, lines 7 ~ 15)

As discussed, the instant invention does not use the "reporters," for example a dye, fluorescent, ultraviolet applied to the test cells.

Accordingly, Spence fails to teach the usage of the illuminated beam being diffracted on the deformed blood cell and projected on the screen.

For the pressure controlling method, Spence teaches that: a flow of cells is maintained through the device via a pump or pressure differential. A valve structure at the branch point permits each cell to enter only one of the branch channels depending on the measurement at the detection point. The pressure is adjusted within or at the outlet of each branch channel, to allow or curtail flow through the channel. (Spence: Col. 13, line 35 ~ Col. 14, line 42)

Apparently, Spence teaches the usage of the positive pressure generated by a pump or pressure differential for controlling the cell flow through the device.

On the contrary, the present invention teaches that a differential pressure generator (33) is connected to the waste blood pot (23) of the disposable blood sample test kit (20) for continuously generating the vacuum (negative) pressure. Therefore, the blood sample is able to flow continuously toward the waste blood pot (23) through the slit channel (22). As the blood test progresses, the pressure of the waste blood pot (23) is gradually increased from the initial vacuum pressure to the atmospheric pressure according to the increasing volume of the flow of the blood sample. (Page 11, line 19 ~ Page 12, line 5)

Apparently, Spence fails to teach the usage of the vacuum (negative) pressure for controlling the cell flow.

As discussed so far, the basic configuration and the functions of the present invention

are different from that of the cited references, Spence et al. and Bessis et al.

Therefore, there is no sensible motivation to combine the cited references, Spence et al. in view of Bessis et al.

Consequently, it is impossible to reach or obtain the configuration and functions of the present invention by combining the cited references.

Further, the examiner indicated that the dependent claim 11 would be allowable, if rewritten to overcome the rejection under 35 U.S.C. 112 - 2nd Paragraph and to include all of the limitations of the base claim and any intervening claims. Thank you for indication of the allowable subject matters.

Accordingly, the limitation of claim 11 is merged into claim 1 to be allowable form of the independent claim.

Therefore, the applicant believes the present application is now in allowance condition and early Notice of Allowance is respectively solicited.

Respectfully submitted

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